

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-028050**Date Inspected:** 23-Jul-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** jobsite**CWI Name:** William Sherwood**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

At the start of the shift this Quality Assurance Inspector (QA) traveled to the SAS project site and observed the work and the inspection performed by American Bridge/Fluor Enterprises (AB/F) welding and Quality Control (QC) personnel. The observations and inspections were performed as noted below:

**13W/14W Drop-In**

This QAI observed Rick Clayborn making the following excavations utilizing Carbon Arc Gouging from Deck Splice 13W/14W A1:

**Indication # Y D W L**

1 130mm 11mm 16mm 100mm

2 420mm 11mm 20mm 60mm

3 740mm 9mm 25mm 65mm

4 775mm 9mm 25mm 40mm

5 860mm 10mm 20mm 60mm

6 915mm 12mm 20mm 60mm

7 1080mm 10mm 20mm 60mm

8 1240mm 12mm 18mm 60mm

9 1340mm 12mm 12mm 70mm

10 1365mm 8mm 25mm 45mm

11 1435mm 8mm 20mm 35mm

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12 1615mm 10mm 20mm 60mm  
13 1780mm 12mm 20mm 50mm  
14 2680mm 10mm 15mm 100mm  
15 4130mm 10mm 15mm 80mm  
16 4405mm 8mm 18mm 70mm  
17 5355mm 10mm 15mm 80mm

QAI witnessed William Sherwood Quality Control Technician perform Magnetic Particle Testing to the above listed excavation of weld 13W/14W-A1. Mr. Sherwood performed testing at a frequency of 100%, this QAI performed a QA verification Magnetic Particle Test at a frequency of 10%. See the Magnetic Particle Testing report dated 7/18/12 for more information.

This QAI observed Rick Clayborn welding the above listed repair excavations utilizing the Shield Metal Arc Welding to the parameters set forth in the approved Welding Procedure Specification using E9018 consumable electrode. During welding operations a 350F preheat was maintained using induction heating blankets. At the conclusion of welding operations post heat was initiated at 450F for four hours.

This QAI observed Welder Steve Davis (ID#7889) using a rosebud torch to preheat splice 13W-122.5-BF-2 to a QC recorded, QA verified temperature of 150F. Preheat temperature was measured using a Tempil Stick. This QAI noted QC Tony Sherwood recording preheat temperature whenever there was a stop in work.

QAI witnessed the welding of 13W-122.5-BF-2 by welder Steve Davis utilizing the Shield Metal Arc Welding Process in the 3G position using E7018 consumable electrodes. The QC recorded and this QAI verified that the weld metal was being deposited to the parameters of Welding Procedure Specification ABF-WPS-D15-1040C. Welder Davis was observed using the stringer method and good workmanship practices in regard to interpass cleaning.

This QAI observed Rick Clayborn making the following excavations utilizing Carbon Arc Gouging from Stiffener 120.6 LS-1 LS-2:

Indication # Y D W L

1 130mm 15mm 30mm 50mm  
2 135mm 15mm 30mm 50mm  
3 20mm 22mm 23mm 70mm  
4 110mm 22mm 20mm 110mm

QAI witnessed William Sherwood Quality Control Technician perform Magnetic Particle Testing to the above listed excavation of weld 13W-120.6 LS-1, LS-2. Mr. Sherwood performed testing at a frequency of 100%, this QAI performed a QA verification Magnetic Particle Test at a frequency of 10%. See the Magnetic Particle Testing report dated 7/18/12 for more information.

This QAI observed Tran Chau welding the above listed repair excavations utilizing the Shield Metal Arc Welding to the parameters set forth in the approved Welding Procedure Specification using E9018 consumable electrode. During welding operations a 350F preheat was maintained using induction heating blankets. At the conclusion of

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welding operations post heat was initiated at 450F for four hours.



## Summary of Conversations:

There were general conversations with Quality Control Inspector William Sherwood, at the start of the shift regarding the location of welding, inspection personnel scheduled for this shift. All observations were relayed to Bill Levell.

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### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510 385 5910, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Daggett,Matt	Quality Assurance Inspector
<b>Reviewed By:</b>	Levell,Bill	QA Reviewer

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